

TREAT AND PREVENT SHOULDER PAIN WITH THESE 10 COMBO MOVES

by Nadya Swedan with exercises demonstrated by Gaby McIntyre

[Photo Courtesy: Kara Sekenski]

Shoulder pain in swimmers is extremely common: up to 70 percent of high school swimmers report shoulder pain during their swimming career, with one in five having episodes of severe pain that takes them out of the water, slowing them down in races and practice.

There are many factors that can cause shoulder pain. Overuse is the most common cause since swimmers rotate their shoulders an average of 50,000 times per week. This overuse phenomenon is made worse if technique is poor. Forward shoulder position, flexibility, strength and muscle firing patterns also are significant factors. Upper body postural position and strength contributes to shoulder pain as well. In addition, improperly weighted and performed dryland exercises can both exacerbate and create shoulder pain.

Swimmers can become injured for many reasons, which can also lead to chronic pain. Being used to muscle soreness and burning muscle pain, they have trouble distinguishing injury pain from workout pain. Pushing through pain is common as they perform challenging exercises and drills, not attending to technique and constantly pushing intensity. High velocity and high-force movements are trends during cross training that are more likely to lead to injury. The pressure to perform in practice leads swimmers to pound and power through drills and sets to keep up with others. This prevents proper stroke practice.

COMMON REASONS FOR SHOULDER PAIN IN SWIMMERS

Overuse
Forward Posture
Inflexibility
Rotator Cuff Weakness
Core Weakness
Improper Technique in Pool and Dryland Exercises

When shoulder pain is present out of the water or keeps an athlete up at night, they may be inclined to take pain medications. Daily Advil/ibuprofen usage is common among athletes, which increases with complaints of pain. Taking an anti-inflammatory medication on a regular basis and on an empty stomach can cause abdominal pain and can lead to gastric bleeds and easier bruising. Frequent use of anti-inflammatory medications during races and extreme workouts can predispose to low potassium levels, kidney damage and rhabdomyolysis. Self-medicating on a regular basis is a red-flag warning that the swimmer should see a doctor for evaluation.

Swimming demands extreme mobility of the shoulder, which, if not balanced with stability, leads to a joint that is weak, inflamed and out of alignment. Understanding that the shoulder is positioned to function in a forward position is the first step to protecting and recovering from shoulder pain. Moving the arms behind the body stretches the shoulder joint to its limits, and lifting overhead repeatedly can lead to pinching (known

as impingement) of the tendons and soft tissue that support the shoulder. This leads to pain and inflammation in the tendons, muscles, ligaments, capsule and bursa. Rotating the trunk with each stroke positions the shoulder forward and allows greatest strength and power without pain and injury.

Trunk rotation cannot happen without core strength. A strong core is essential to success in swimming. The core is the group of muscles to which the limbs and trunk anchor to each other at the center of a swimmer's body. A strong core allows a stronger streamline, better stability and positioning in the water, and a greater source of power from the limb-to-trunk connections. Addressing the core is key to overcoming and preventing shoulder pain and injury. In dryland training, core muscles to be strengthened include the transverse abdominus, obliques, rectus, erector spinae, latissimus dorsi, gluteus and trapezius muscles. A strong core actually helps open up and take the stress off the shoulders by allowing more effective trunk rotation.

BENEFITS OF A STRONG CORE IN SWIMMING
More Effective Trunk Rotation
Better Streamline
Improved Stability
Maintain Trunk Positioning
Provides a Source of Power for Arms and Legs

Posture must also be considered and addressed in dryland training: slumped sitting posture with forward and rounded shoulders—common from leaning over books, computers and mobile devices—perpetuates tight pectoralis and rotator cuff muscles. Bad posture also pulls on the shoulder blade stabilizers, contributing to instability, weakness as well as neck and back irritation.

EXERCISES

The accompanying exercises address flexibility, posture, stability and strength with safe shoulder positioning. They utilize a foam roller (ideal for swimmers for stretching and self-massage, but replaceable with a rolled towel or round pillow) and 2- to 10-pound weights (replaceable with large water bottles). Always begin a new exercise program with the lightest amount of weight; rotator cuff and shoulder stabilizing muscles are tiny stabilizers that do not need bulk.

These exercises can be done daily, but should be done at least twice a week in one to two sets of 10-15 repetitions, depending on how the swimmer feels. **THE EXERCISES SHOULD NOT BE PAINFUL.** If any exercise causes pain, reduce the motion, repetition and weight. You may even need to skip the exercise and try again in a week or two.



[1] ALTERNATING TOE TOUCHES

- Lie on back with arms and legs extended
- Tighten core by sucking stomach in and squeezing lower back to floor
- With straight arms and legs, reach your right arm to left leg as you also lift your head and shoulders for upper-body crunch
- Slowly lower
- Switch sides on each repetition



[2] OPPOSITE ARM/LEG ON ALL FOURS

- On hands and knees, tighten core by sucking stomach to ceiling
- Raise and straighten opposite arm and opposite leg
- Hold for a count of 3
- Lower and switch sides



[3] SUPERMANS

- On stomach with your arms and legs straight and extended, raise your hands and feet off the floor toward the ceiling with

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a slight back arch

- Pull stomach in tight
- Hold for a count of 3
- Slowly lower



[4] FOAM ROLLER SCAPULAR PROTRACTION/RETRACTION

- Lying on a foam roller directly beneath your spine, hold weights with your arms straight pointed toward the ceiling
- Keep shoulders down, not shrugged
- Tighten core
- Keeping your elbows and wrists straight, push the weights toward the ceiling, lifting your shoulders to keep shoulders from shrugging
- Pull the weights back down, squeezing the foam roller with your shoulder blades



[5] STRAIGHT ARM PLANK WITH PLUS

- In a plank position with your hands on a foam roller, keep your abdominal muscles sucked in tight
- Let your shoulder sink into sockets, and squeeze shoulder blades together (retract)
- Release the shoulder squeeze and pull your body back to the starting position (protract)
- Do not shrug your shoulders; keep them down

[6] ROTATOR CUFF STRENGTH WITH BRIDGE

- Lie on your back with your feet placed on a foam roller for abdominal challenge; position your arms out to the side with your elbows bent at 90 degrees; hold light-weight dumbbells in your hands
- Rotate your shoulders up and down, not touching the floor with the weights, not causing pain and not moving quickly



- With elbows planted on the floor, rotate your arms down toward your feet, squeeze and lift gluts up with your stomach sucked in tight to perform a bridge exercise
- Lower bridge while rotating arms up toward head, keeping your elbows on the floor and your shoulder blades pressed into the floor



[7] SCAPTION

- Sitting on a foam roller—or standing—hold weights with your thumbs up, elbows straight out and arms at a 45-degree angle from your body and in front of you
- Squeeze shoulder blades together, keeping shoulders down and back
- Begin with weights at thigh level, then lift to just below shoulder height
- Slowly lower and repeat



[8] THE 100s (PILATES EXERCISE)

- Lying on your back, keep stomach sucked in tight and shoulder blades pressed into the floor
- Raise both legs together off the ground: the easiest is to bend both knees to 90 degrees; the more challenging is to have your legs 12 inches from the ground and straight
- Press straight arms repeatedly into floor for counts of 10, 10 sets for 100



[9] SIDE LEG RAISE WITH EXTERNAL ROTATION

- Lying on your side with your elbow held at the side and bent at 90 degrees, hold a light-weight dumbbell with abs sucked in tight
- Rotate from your shoulder to bring the weight up toward the ceiling while lifting your top leg and keeping it straight
- Reverse the rotation of the weight down toward the floor while lowering your top leg, again keeping it straight
- Keep shoulder back and down, abs sucked in



[10] PEC STRETCH/SPINE ROLLOUT

- Lying your back on a foam roller parallel to and under your spine, extend your arms out to sides and stretch your chest muscles
- Roll your body over the foam roller, right to left, back and forth, and under your shoulder blades to massage paraspinals
- Re-position the foam roller from parallel and under your spine to perpendicular to your spine
- Roll your body up and down over the foam roller, including gluts and legs

SUMMARY

These time-efficient combo exercises address both upper body and core strength together. If you are having pain during any of the exercises, try reducing the motion and lowering the weight. If this does not help, skip the exercise and try again in a few days. If you feel shoulder or upper arm soreness, apply ice after exercise, practice and before bed for five to 10 minutes. See a doctor if the pain does not resolve within a week.

All swimmers will benefit from these exercises twice a week, not just to prevent and treat shoulder issues, but also to increase power and strength during swimming. The added benefit of improved posture is a bonus for neck and back health, and provides a more powerful-appearing physique.

Preventing shoulder issues before they start and treating shoulder pain as soon as it starts is key to faster swimming without pain or injuries. ❖

About the Author:

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About the Athlete:

Gaby McIntyre is finishing her sophomore year at Manhasset High School in Manhasset, Nassau County, N.Y. on the North Shore of Long Island. She also swims for Long Island Express.

NOTICE

All dryland training and instruction should be performed under the supervision of a qualified coach or instructor, and in circumstances that ensure the safety of participants